

SYSTEM AND METHOD FOR CONTROLLING SIGNAL STRENGTH OVER A
REVERSE LINK OF A CDMA WIRELESS COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

A service option overlay for a CDMA wireless communication in which

5 multiple allocatable subchannels are defined on a reverse link by assigning different code phases of a given long pseudonoise (PN) code to each subchannel. The instantaneous bandwidth needs of each on-line subscriber unit are then met by dynamically allocating additional channel capacity on an as needed basis for each network layer connection. The system efficiently provides a relatively large number of

10 virtual physical connections between the subscriber units and the base stations on the reverse link for extended idle periods such as when computers connected to the subscriber units are powered on, but not presently actively sending or receiving data. These maintenance subchannels permit the base station and the subscriber units to remain in phase and time synchronism by monitoring power, carrier-to-interference

15 (C/I), or signal-to-noise (SNR) ratios. The power levels over the subchannels is regulated to minimize interference. This in turn allows fast acquisition of additional capacity as needed by allocating additional orthogonal codes within the same code phase and by varying the spreading factor of the codes, as well as by adding additional code phases.